

WHAT IS CLAIMED IS:

1. A method for monitoring the operation of a plurality of turbines in respective operating locations, the method comprising the steps of:

inputting operation data from each of the turbines;

processing the operation data to generate secondary operation data; and

generating at least one report based on the secondary operation data.
2. The method of claim 1, wherein the step of processing the operation data to generate secondary operation data includes applying data quality standards against the operation data.
3. The method of claim 2, wherein the step of applying data quality standards against the operation data results in operation data, which satisfied the data quality standards, being designated as approved operation data.
4. The method of claim 3, wherein the step of generating at least one report based on the secondary operation data includes displaying reports based only on the approved operation data, and not operation data that was not approved, such that inaccurate secondary operation data is not included in the report.
5. The method of claim 4, wherein the steps of inputting operation data from each of the turbines, processing the operation data to generate secondary operation data, and generating at least one report based on the secondary operation data are automated.
6. The method of claim 2, wherein applying data quality standards against the operation data includes:

defining a window of time for analysis of the operation data;

determining the number of complete data sets received in the window of time; and

comparing the number of complete data sets received in the window of time with a threshold value, the threshold value designating the number of complete data sets that should have been received in the window of time.

7. The method of claim 6, wherein, if the number of complete data sets received in the window of time is less than the threshold value, which designates the number of complete data sets that should have been received in the window of time, then such operation data is not processed to generate secondary operation data.

8. The method of claim 6, wherein if the number of complete data sets received in the window of time with a threshold value is less than the threshold value, designating the number of complete data sets that should have been received in the window of time, then such operation data is processed to generate secondary operation data;

the method further including the step of including an indicator with the generated secondary data reflecting the threshold value comparison.

9. The method of claim 1, wherein the operation data is raw data from each of the turbines.

10. The method of claim 9, wherein sensors are located on each of the turbines, the sensors outputting the operation data.

11. The method according to claim 1, wherein the inputting the operation data from each of the turbines includes transmitting the operation data from the turbine to a monitoring entity.

12. The method according to claim 1, wherein the operation data includes run time of the turbine.

13. The method of claim 12, wherein the run time of the turbine is determined by sensing when the turbine is above a threshold value.

14. The method of claim 1, wherein the operation data is saved in a data storage portion prior to the step of processing the operation data to generate secondary operation data.

15. The method of claim 1, wherein the step of generating at least one report based on the secondary data includes presenting reports on a web page accessible by the Internet.

16. The method of claim 1, wherein the step of generating at least one report based on the secondary data includes presenting reports in a printed format.

17. The method of claim 1, wherein the operation data includes at least one of power output, turbine rotational speed, and turbine load attributes.

18. The method of claim 1, wherein the secondary operation data includes at least one of service factor and starting reliability.

19. The method of claim 1, wherein the step of generating at least one report based on the secondary operation data includes categorizing the plurality of turbines into duty classifications.

20. The method of claim 1, further including the step of determining a duty status of at least one of the turbines based on the operation data;

the step of generating at least one report including displaying the duty status with the secondary operation data.

21. A system for monitoring the operation of a plurality of turbines in respective operating locations, the system comprising:

a data acquisition portion that inputs operation data from each of the turbines;

a data processor/calculation portion that processes the operation data to generate secondary operation data; and

a data presentation portion that generates at least one report based on the secondary operation data.

22. The system of claim 21, wherein the data processor/calculation portion applies data quality standards against the operation data.

23. The system of claim 22, wherein the data processor/calculation portion defines a window of time for analysis of the operation data;
determines the number of complete data sets received in the window of time; and

compares the number of complete data sets received in the window of time with a threshold value, the threshold value designating the number of complete data sets that should have been received in the window of time.

24. The system of claim 23, wherein if the number of complete data sets received in the window of time with a threshold value is less than the threshold value, the number of complete data sets that should have been received in the window of time, then the data calculation/calculation portion does not process such operation data to generate secondary operation data.

25. The system of claim 21, wherein the data presentation portion that generates at least one report based on the secondary operation data uses a web page accessible by the Internet.

26. A system for monitoring the operation of a plurality of turbines in respective operating locations, the system comprising:

means for inputting operation data from each of the turbines;

means for processing the operation data to generate secondary operation data; and

means for generating at least one report based on the secondary operation data.

27. A method for monitoring the operation of a plurality of turbines in respective operating locations, the method comprising the steps of:

inputting operation data from each of the turbines including transmitting the operation data from the turbine to a monitoring entity;

processing the operation data, at the monitoring entity, to generate secondary operation data including applying data quality standards against the operation data; and

generating at least one report based on the secondary operation data, the report transmitted over the internet;

wherein the steps of inputting operation data from each of the turbines, processing the operation data to generate secondary operation data, and generating at least one report based on the secondary operation data are automated.

28. The method of claim 27, wherein the step of applying data quality standards against the operation data results in operation data, which satisfied the data quality standards, being designated as approved operation data; and

wherein the step of generating at least one report based on the secondary operation data includes displaying reports based only on the approved operation data, and not operation data that was not approved, such that inaccurate secondary operation data is not included in the report.

29. A system for monitoring the operation of a plurality of turbines in respective operating locations, the system comprising:

a data acquisition portion that inputs operation data from each of the turbines, the operation data being transmitted from the turbine to the data acquisition portion;

a data processor/calculation portion that processes the operation data to generate secondary operation data, the data calculation/calculation portion applying data quality standards against the operation data to validate the operation data; and

a data presentation portion that generates at least one report based on the secondary operation data, the report transmitted over the internet;

wherein operation of the data acquisition portion, the data calculation/calculation portion and the data presentation portion are automated.

30. A system for monitoring the operation of a plurality of turbines in respective operating locations, the system comprising:

means for inputting operation data from each of the turbines including transmitting the operation data from the turbine to a monitoring entity;

means for processing the operation data, at the monitoring entity, to generate secondary operation data including applying data quality standards against the operation data; and

means for generating at least one report based on the secondary operation data, the report transmitted over the internet;

wherein the steps of inputting operation data from each of the turbines, processing the operation data to generate secondary operation data, and generating at least one report based on the secondary operation data are automated.